

ABSTRACT:

This paper presents the results of analysis of energy-dispersive X-ray fluorescence (EDXRF) applied on the human hair. We determined the concentrations of heavy metals Mn, Fe, Ni, Cu and Zn of 29 hair samples of sanitation workers and 5 samples of students were assumed to be environmentally healthy group. The accuracy and precision of the method for the elements were evaluated through the analysis of a standard hair sample. We compared the concentrations of human hair from an occupationally exposed group of sanitation workers and a control group (students). The hair of the exposed group showed a range of concentrations of 6-28 ppm Mn, 20-195 ppm Fe, 258-549 ppm Ni, 452-1182 ppm Cu and 334-1556 ppm Zn, while that of the control group has a range of 7-26 ppm Mn, 22-61 ppm Fe, 309-558 ppm Ni, 438-700 ppm Cu and 224-876 ppm Zn.